

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>DX0589K</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/US 97/ 10819</b>	International filing date (day/month/year) <b>02/07/1997</b>	(Earliest) Priority Date (day/month/year) <b>05/07/1996</b>
Applicant <b>SCHERING CORPORATION</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 7 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. ☐ Certain claims were found unsearchable (see Box I).

2. ☒ Unity of invention is lacking (see Box II).

3. ☒ The international application contains disclosure of a nucleotide and/or amino acid sequence listing and the international search was carried out on the basis of the sequence listing

☒ filed with the international application.

☐ furnished by the applicant separately from the international application,

☐ but not accompanied by a statement to the effect that it did not include matter going beyond the disclosure in the international application as filed.

☐ Transcribed by this Authority

4. With regard to the title, ☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this International Search Report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is:

Figure No. \_\_\_\_\_ ☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☒ None of the figures.

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 97/10819

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 6 C12N15/19 C12N15/12 C12N1/21 C07K14/52 C07K14/715  
C07K16/24

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 C07K C12N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 96 05856 A (HUMAN GENOME SCIENCE, INC.) 29 February 1996 see claims; figure 1 see sequences ID.1 and 2 page 40 see page 27; example 1 see page 31; example 3 ---	1-10
X	WO 96 16979 A (INCYTE PHARMACEUTICALS, INC.) 6 June 1996 see page 14 - page 23 see sequences ID 3 and 4 pages 27-28 see claims --- -/--	1-10

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*&\* document member of the same patent family

Date of the actual completion of the international search

12 February 1998

Date of mailing of the international search report

03.03.98

Name and mailing address of the ISA

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Le Cornec, N

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	L. HILLIER ET AL: "za8lg11.r1 Soares fetal lung NbHL19W Homo sapiens cDNA clone 299012 5'" EMBL DATABASE ENTRY HS519338, ACCESSION NUMBER W05519, 8 May 1996, XP002055484 see abstract ---	1-7
X	T.I. BONNER ET AL: "Cloning, tissue distribution and chromosomal localization of a potential G-protein-linked receptor" EMBL DATABASE ENTRY HS459841, ACCESSION NUMBER U45984, 5 April 1996, XP002055485 see abstract ---	1-10
A	L. HILLIER ET AL: "The WashU-Merck EST project;za74f04.s1 Homo sapiens cDNA clone 298303 3'" EMBL DATABASE ENTRY HS958307, ACCESSION NUMBER N73958, 23 March 1996, XP002048193 see abstract ---	1-7
A	T.J. SCHALL ET AL: "Chemokines, Leukocyte trafficking, and inflammation" CURRENT OPINION IN IMMUNOLOGY, vol. 6, no. 6, December 1994, pages 865-873, XP002048194 cited in the application ---	
P,X	A. P. VICARI ET AL: "TECK: a novel CC chemokine associated with T-cell development" THE JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY, vol. 99, no. 1 part 2, January 1997, page S246 XP002048195 see abstract 1003 ---	1-10
P,A	C. NGUYEN ET AL: "MTA.F02.091 5'. a MTA adult mouse thymus library Mus musculus cDNA clone MTA.F02.091 5'end" EMBL DATABASE ENTRY MMW91616 ; ACCESSION NUMBER'91616, 10 July 1996, XP002048196 see abstract --- -/--	1-7

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
T	A.P. VICARI ET AL: "TECK: A novel CC chemokine Specifically expressed by thymic dendritic cells and potentially involved in T cell development" IMMUNITY, vol. 7, August 1997, pages 291-301, XP002048197 see the whole document ---	1-11
P,X	D.L.ROSSI ET AL: "Identification through bioinformatics of two new macrophage proinflammatory human chemokines" JOURNAL OF IMMUNOLOGY., vol. 158, no. 3, 1 February 1997, BALTIMORE US, pages 1033-1036, XP002055486 see the whole document ---	1-10
P,X	WO 96 22374 A (INCYTE PHARMACEUTICALS, INC.) 25 July 1996 see sequences ID. no 1 and 2 see claims; figure 1; examples ---	1-11
P,X	WO 96 24668 A (HUMAN GENOME SCIENCES, INC.) 15 August 1996 see sequences id no. 1 and 2 see claims; examples 1,3,5 ---	1-11
P,X	RYU YOSHIDA ET AL: "molecular cloning of a novel human CC chemokine EBI1-ligand chemokine that is a specific functional ligand for EBI1, CCR7" JOURNAL OF BIOLOGICAL CHEMISTRY., vol. 272, no. 21, 23 May 1997, MD US, pages 13803-13809, XP002055487 see page 13805; figure 2A ---	1-10
P,X	MASATAKA BABA ET AL: "Identification of CCR6, the specific receptor for a novel lymphocyte-directed CC chemokine LARC" JOURNAL OF BIOLOGICAL CHEMISTRY., vol. 272, no. 23, 6 June 1997, MD US, pages 14893-14898, XP002055488 see the whole document ---	1-10
P,X	KUNIO HIESHIMA ET AL: "Molecular cloning of a novel CC Chemokine liver and activation-regulated chemokine (LARC) expressed in liver" JOURNAL OF BIOLOGICAL CHEMISTRY., vol. 272, no. 9, 28 February 1997, MD US, pages 5846-5853, XP002055489 see the whole document ---	1-10
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	A. ZABALLOS ET AL: "Molecular cloning and RNA expression of two new human chemokine receptor-like genes" BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS., vol. 227, no. 3, 23 October 1996, ORLANDO, FL US, pages 846-853, XP002055490 see the whole document especially page 849 figure 1B	1-10
T	----- OSAMU YOSHIE ET AL: "Novel lymphocyte-specific CC chemokines and their receptors" JOURNAL OF LEUKOCYTE BIOLOGY , vol. 62, no. 5, November 1997, pages 634-644, XP002055491 -----	

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US 97/10819

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

**1. Claims: 1-11 all partially**

Mouse and human TECK as in sequences ID.2 and 4 (their corresponding polynucleotide sequence). Production by genetic engineering. Antibody.

**2. Claims: 1-11 all partially**

Human MIP-3 alpha as in sequence ID.6 (its corresponding polynucleotide sequence). Production by genetic engineering. Antibody.

**3. Claims: 1-11 all partially**

Human MIP-3 beta as in sequence ID.8 (its corresponding polynucleotide sequence). Production by genetic engineering. Antibody.

**4. Claims: 1-11 all partially**

DC CR as in sequence ID.10 (its corresponding polynucleotide sequence). Production by genetic engineering. Antibody.

**5. Claims: 1-11 all partially**

M/DC CR as in sequence ID.12 (its corresponding polynucleotide sequence). Production by genetic engineering. Antibody.

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 97/10819

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9605856 A	29-02-96	AU 7672394 A EP 0777494 A	14-03-96 11-06-97
WO 9616979 A	06-06-96	US 5602008 A AU 4504696 A EP 0793672 A	11-02-97 19-06-96 10-09-97
WO 9622374 A	25-07-96	US 5605817 A AU 5168096 A CA 2207009 A EP 0807177 A	25-02-97 07-08-96 25-07-96 19-11-97
WO 9624668 A	15-08-96	AU 1916795 A EP 0811059 A	27-08-96 10-12-97